

EXHIBIT A

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

GOOGLE LLC,

Plaintiff

v.

SONOS, INC.,

Defendant.

CASE NO. 3:20-cv-06754-WHA

Related to CASE NO. 3:21-cv-07559-WHA

**FIRST SUPPLEMENTAL REPLY EXPERT REPORT OF DR. DAN SCHONFELD
REGARDING U.S. PATENT NO. 10,848,885 AND U.S. PATENT NO. 10,469,966**

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1. I have been retained as an expert witness in this action on behalf of Google, LLC (“Google”) to testify as a technical expert concerning the technology at issue in U.S. Patent No. 10,848,885 (“the ’885 patent”) and U.S. Patent No. 10,469,966 (“the ’966 patent”) (collectively, “the asserted patents”).

2. I have been informed by counsel that, on March 2, 2023, the Court granted Google’s motion for reconsideration of its October 18, 2022 Order and withdrew its prior ruling of summary judgment in favor of Sonos as to the validity of asserted claim 1 of the ’885 patent. As such, I understand that on March 21, 2023, Dr. Almeroth submitted a First Supplemental Rebuttal Expert Report of Dr. Kevin C. Almeroth (“First Supplemental Rebuttal Report”) allegedly addressing portions of the ’885 patent that were not addressed in his prior reports.

3. I submit this First Supplemental Reply addressing Dr. Almeroth’s opinions in his March 21, 2023 report. This Report does not respond to every issue Dr. Almeroth raised in his 52-page rebuttal report; to the extent an issue is not addressed herein, it does not mean I agree with Dr. Almeroth. While I disagree with Dr. Almeroth’s opinions, I reserve my right to explain the particular reasons that I disagree with Dr. Almeroth’s opinions and to explain why the opinions in my Opening Report are unaffected by Dr. Almeroth’s rebuttal opinions in deposition and at trial. I have not attempted to add new material to this Reply Report that should have been placed in the Opening Report. I expect to testify at trial regarding the matters set forth in this Report, if asked about those matters by the Court or the parties’ attorneys.

4. Dr. Almeroth states that in my November 30, 2022 Opening Report I “only provided analyses of the prior art as compared to Claim 1 of the ’885 Patent and [I] then premised [my] opinions regarding the Asserted Claims of the ’966 Patent on [my] analyses of the prior art as compared to Asserted Claim 1 of the ’885 Patent.” Almeroth 2023.03.21 Suppl. Rep. at ¶11. But simply because I cross-referenced support for elements of the ’966 Patent with elements of

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the '885 Patent does not mean that I failed to address invalidity of the '966 Patent. In my analysis of the elements of claim 1 of the '966 Patent, I cross-referenced to my analysis of the '885 patent. For example, with respect to the “computing device” and “controller” elements of claim 1 of the '885 – I cross-referenced to my analysis of claim elements 1.6, 1.7 and 1.9 of the '885 patent, which discloses aspects the Sonos 2005 controllers. *See e.g.*, 11.30.2022 Schonfeld Op. Report at ¶¶285, 336-338, 342, 347, 353-354, 367, 375-377, 381, 384, 441, 443. Similarly, although I included cross-references for other claim elements of the '966 patent, the sections I cross-referenced provide the relevant disclosure for those elements of the '966 patent. *See, e.g.*, 11.30.2022 Schonfeld Op. Report at ¶¶337-338, 342, 347, 356, 441, 446, 450. I also note that Dr. Almeroth himself relies heavily on cross-references between the '966 and '885 Patents in his reports, including in his supplemental report. *See e.g.*, Almeroth 2023.03.21 Suppl. Rep. at ¶45 (“I addressed Dr. Schonfeld’s analyses of Sonos’s 2005 system in view of the “general knowledge of a POSITA” that he provided for Asserted Claim 1 of the '885 Patent in my 1/13/2023 Rebuttal Report as part of my analyses and opinions as to why the Asserted Claims of the '966 Patent are not rendered obvious”). And although he claims I did not provide an opinion on the invalidity of the '966 Patent, Dr. Almeroth previously acknowledged in his January 13, 2023 Rebuttal Report that “[I] nevertheless opine[d] that claim limitations 1.4 and 1.6 of Asserted Claim 1 of the '966 Patent were either disclosed or rendered obvious by Sonos’s 2005 system.” Almeroth 2023.03.21 Suppl. Rep. at ¶566.

5. As set forth in my November 30, 2022 Opening Report, I am being compensated at my standard consulting rate of \$600 per hour for time spent on this matter, plus reasonable out-of-pocket expenses. I have received no additional compensation for my work in this litigation, and my compensation does not depend upon the contents of this Report, any testimony that I may provide, or the ultimate outcome of this litigation.

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6. In forming my opinions, I have relied on my knowledge and experience and on the documents and information described below. I reserve the right to modify and supplement my analysis and conclusions set forth in this Report based upon any additional discovery performed by the parties or in response to any reports by experts for Sonos, Inc. (“Sonos”). I also reserve the right to modify and supplement my analysis and conclusions set forth in this Report based upon any change to any of the applicable legal standards explained to me by Google’s counsel.

7. At trial I may rely on visual aids and/or analogies concerning elements of the asserted patents or other aspects of my opinions or the material in this Report. At trial I may also use as exhibits various documents produced in this case that relate to the matters discussed in this Report. I have not yet selected the particular exhibits that I might use. In addition, I may create or assist in the creation of certain demonstrative evidence to assist me in testifying. As I discuss further below, I reserve my rights to rely on the demonstratives disclosed with this Report and the previous demonstratives that I have prepared as well.

I. QUALIFICATIONS

8. I fully incorporate herein by reference the qualifications disclosed in my Opening Report.

II. MATERIALS CONSIDERED

9. In forming the opinions that I express in this Report, I considered Dr. Almeroth’s First Supplemental Rebuttal Report including any demonstratives, his previous reports including any demonstratives, the materials referenced in this Report, including the asserted patents and all patents and patent applications to which each asserted patent claims priority, their prosecution histories, prior art references and products described in this Report, Google’s and Sonos’s products described in this Report, the documents and things identified in this Report and in the lists attached

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to my previous reports and Dr. Almeroth's previous reports in this matter, and my own relevant knowledge and experience.

III. LEVEL OF ORDINARY SKILL IN THE ART

10. I fully incorporate herein by reference my discussion of the level of ordinary skill in the art disclosed in my Opening Report.

IV. LEGAL STANDARDS

11. I have been informed by counsel of various legal standards. I fully incorporate herein by reference my discussion of the various legal standards disclosed in my Opening Report.

V. SUMMARY OF OPINIONS

12. It is my opinion that claim 1 of the '885 patent and claims 1, 2, 4, 6, 8, 9, 10, 12, 14, and 16 of the '966 patent are invalid. I also provide reply opinions responding to Dr. Almeroth's rebuttal report as set forth below.

VI. THE ASSERTED PATENTS

13. I understand that the patents asserted against Google are the '885 and '966 patents. The chart below lists the claim of the asserted patents that Dr. Almeroth discussed in his report (the "asserted claims").

Patent No.	Claim(s) Asserted Against Google
10,848,885	1
10,469,966	1, 2, 4, 6, 8, 9, 10, 12, 14, and 16

A. Claim Construction

14. I incorporate herein by reference my discussion of claim constructions from my Supplemental Report. *See* Schonfeld Suppl. Rep. §II.

15. In all cases, I applied the agreed claim constructions or the Court's constructions in performing my analyses and rendering my opinions in this Report.

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B. Overview of the Asserted Claims

16. I have provided an overview of the asserted claims in my Opening Report, which I incorporate herein by reference.

VII. STATE OF THE ART AND OVERVIEW OF THE PRIOR ART

17. I incorporate herein by reference my discussion of the state of the art and the overview of the prior art from my Opening Report. *See* Nov. 30, 2022 Schonfeld Op. Rep.

VIII. INVALIDITY BASED ON ANTICIPATION AND OBVIOUSNESS

18. It is my opinion that claim 1 of the '885 patent is anticipated and/or rendered obvious by the prior art identified in my Opening Report. I reserve my right to offer opinions on invalidity of claims other than claim 1 in light of new information or changes in the posture of the litigation. To the extent Dr. Almeroth is permitted to provide analysis and/or new opinions regarding the asserted claim 1 of the '885 patent, I reserve my right to address such analysis and/or opinions in a supplemental report and/or at trial. I also understand that Sonos has not yet offered, in response to Google's requests, Dr. Almeroth for deposition regarding his latest supplemental report. Therefore, I also reserve my right to provide additional opinions should Dr. Almeroth be deposed.

A. Claims of the '885 Patent Are Obvious Based On Prior Art Sonos Products ("Sonos System")

1. Sonos's 2005 System in view of The General Knowledge of a POSITA

19. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of the general knowledge of a POSITA. I also addressed Sonos 2005 in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23,

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2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Sonos's 2005 system in view of the "general knowledge of a POSITA" provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of the "general knowledge of a POSITA." As I explained in my prior January 23, 2023 Report, in view of Dr. Almeroth's infringement opinions, the Sonos 2005 system satisfied the requirements of the '885 and '966 patents' requirements for a first zone player to be "operating in a standalone mode," at least for the party mode. Furthermore, under Dr. Almeroth's interpretation of "zone scene," the claimed instructions are met not only through SetAVTransportURI messages, but also other playback transport messages utilized in the system.

A POSITA would have been motivated to expand the group functionality of the Sonos 2005 system to allow for additional persistently-saved groups, similar to the existing party mode. A POSITA would have also had a reasonable expectation of success in modifying Sonos 2005 to allow for multiple saved groups (*e.g.*, party mode). This is because there is no specific technical challenge or hurdle for saving two groups as opposed to saving one group. A POSITA would have known that users of whole-home audio systems would have wanted the ability to create multiple persistently-saved groups, allowing a user to create for example a "Morning" group at 2pm that could be invoked the next day at 8am. Expanding the "party mode" functionality and allowing a user to persistently save multiple zone groups would have been a straightforward combination of known methods (using a persistently saved party mode group) to yield predictable results (multiple persistent groups that could be selected for playback at a later time)—there is nothing surprising or unpredictable about the ability to save two groups once it is known how to save one.

20. A POSITA modifying Sonos 2005 to give a user the ability to not just have one saved party mode but two saved party modes would have had a reasonable expectation of success

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at least because there are no structural changes or memory limitations that would have prevented the Sonos 2005 system from storing multiple saved groups. Allowing users to save multiple groups persistently, *e.g.*, to have multiple party modes, would have been nothing more than a substitution of one known element (an ad-hoc group) for another (a persistent group such as party mode) to obtain predictable results—the ability for the user to create, save, and access multiple groups at different times without having to link or unlink speakers each and every time. Such a modification to the Sonos 2005 would have required a simple application of known techniques (the ability to save persistently a party group) to improve similar devices (zone players) in the same way to achieve predictable results—the ability to create, save, and play back different groups for later playback. I have discussed in my prior reports multiple prior art systems and references that demonstrated to a POSITA that there would be reasonable expectations of success in making this combination, given, among other things, the prevalence of this technology known in the art.

21. Thus, nothing in Dr. Almeroth’s First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the ’885 patent is rendered obvious based on Sonos’s 2005 system in view of the “general knowledge of a POSITA.”

2. Sonos’s 2005 System in view of Sonos Forums

22. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the ’885 patent is rendered obvious based on Sonos’s 2005 system in view of Sonos Forums. I also addressed Sonos Forums in the context of the ’966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the ’966 patent over Sonos’s 2005 system in view of Sonos Forums provide further support for my opinion that asserted claim 1 of the ’885 patent is rendered obvious based on Sonos’s 2005 system in view of Sonos Forums. For the same reasons I discussed above in relation to Sonos 2005 in view of the

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knowledge of a POSTA, a POSITA would have been motivated to expand the group functionality of the Sonos 2005 system in view of Sonos Forums, to allow for multiple persistently-saved groups, and a POSITA would have had a reasonable expectation of success in doing so.

23. This is at least obvious because there is no specific technical challenge or hurdle for saving two groups as opposed to saving one group. A POSITA would have considered the ability to save multiple groups at the same time, as evidenced at least by the Sonos Forums indicating that it was cumbersome to link/unlink groups repeatedly, but did not identify any obstacles to implementation. *See, e.g.*, February 27, 2005 post by “theboyg” (“This ‘link/unlink’ business is really cumbersome . . . Why can’t I have a virtual zone . . . [t]hen I don’t have to keep manually linking/unlinking multiple zones every time. PLEASE!”). I understand that even Mr. Millington when asked why it took Sonos roughly 15 years to implement the ability to save multiple groups persistently only referenced “year-by-year prioritization” and Mr. Lambourne’s continued desire for a “more grandiose implementation,” but no technical challenges or expectations of failure. *See, e.g.*, Millington Tr. at 60:5-61:5. Modifying Sonos 2005 with Sonos Forums in this way would have required nothing more than a substitution of one known element (a group) for another (a party group) to obtain predictable results—the ability for the user to create and access multiple groups at different times without having to link or unlink speakers each and every time. This modification to Sonos 2005 would have used known techniques (the ability to save persistently a party group) to improve similar devices (zone players) in the same way to achieve predictable results—the ability to set up different groups for later playback and not have to “keep manually linking/unlinking multiple zones every time.” *Id.*

24. Thus, nothing in Dr. Almeroth’s First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the ’885 patent is rendered obvious based on Sonos’s 2005 system in view of Sonos Forums.

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3. Sonos's 2005 System in view of Nourse

25. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Nourse. I also addressed Nourse in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Sonos's 2005 system in view of Nourse provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Nourse.

26. Dr. Almeroth argued that the combination of Sonos's 2005 System with Nourse would not have rendered claim 1 of the '885 patent obvious. I disagree for several reasons. First, Dr. Almeroth argued the combination would not render claim 1 of the '885 patent obvious because both Sonos 2005 and Nourse failed to disclose certain elements of claim 1. I relied on Nourse in combination with Sonos 2005 because, to the extent Sonos 2005 did not explicitly disclose "zone scenes," Nourse does. Nourse discloses the ability to create and save "zone scenes," allowed speakers to operate in standalone mode even after having been joined to a "zone scene," and allowed speakers to be part of overlapping groups. Although Nourse describes a public address system, Nourse makes clear that its invention "can also find application in a residential environment." *E.g.*, Nourse at 3:8-19. Nourse makes clear that each speaker (speaker 152 and corresponding remote unit 130) can be part of multiple groups (be "assigned up to four group identifiers (IDs)") and is capable of receiving content both "to [its] individual remote speaker address **and** group address." (emphasis added). Nourse at 3:58-59 and 2:39-40. For example, Fig. 4 describes the use of both group configuration commands and the user of an individual speaker page command **after** the groups have already been configured. *See also, e.g.*, Nourse at 5:20-21, 7:49-60.

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27. Dr. Almeroth claims there would have been no motivation for a POSITA to combine the Sonos 2005 system with the Nourse system. I disagree. A POSITA would have been motivated to combine the individual “Speaker page” functionality of Nourse with the group functionality of the Sonos 2005 system to allow for selective broadcast to selected speakers in the network system. Both Nourse and Sonos 2005 indicate that it would be desirable to provide such selective broadcasting. *See, e.g.*, Nourse at 2:9-14, *see, e.g.*, 2005 article¹ (describing the ability to listen to different playlists in different rooms at the same time). Allowing a user to send a play command (a “Speaker page”) to an individual speaker, regardless of which groups that speaker is a part of, would have been a straightforward combination of known methods (sending messages to speakers, saving group configurations) to yield predictable results and predictable improvements for users (an individual speaker playing individually despite/while being part of a group). Additionally, modifying Sonos 2005 to include the Nourse’s “Speaker page” would have simply required the substitution of a group playback message with an individual speaker playback message, *i.e.*, a substitution of one known element for another to obtain predictable results (again, an individual speaker playing individually despite being part of a group). Modifying Sonos 2005 to include the Nourse “Speaker page” would also have been using known techniques (the ability to send individual messages to speakers while storing group configuration information) to improve similar devices (in-home speakers) in the same way (to provide selective broadcasting) to achieve predictable results—the ability to set up different groups while retaining the ability to playback to individual speakers. I have discussed in my prior reports multiple prior art systems and references that demonstrated to a POSITA that there would be reasonable expectations of success in making this combination.

¹ <https://www.pocket-lint.com/speakers/reviews/sonos/68489-sonos-digital-sound-music-wireless/>

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28. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Nourse.

4. Sonos's 2005 System in view of Squeezebox

29. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Squeezebox. I also addressed Squeezebox in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Sonos's 2005 system in view of Squeezebox provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Squeezebox. A POSITA would have been motivated to expand the group functionality of the Sonos 2005 system in view of Squeezebox, to allow for additional persistently-saved groups beyond the existing party mode.

30. For the same reasons I discussed above in relation to Sonos 2005 in view of the knowledge of a POSITA, a POSITA would have had a reasonable expectation of success in carrying out such a modification.

31. This is at least obvious because there is no specific technical challenge or hurdle for saving two groups as opposed to saving one group. A POSITA would have been motivated to look for other audio systems beyond the Sonos 2005 system, and would have looked to existing multi-speaker systems such as the Squeezebox system. Expanding the "party mode" functionality and allowing a user to save persistently multiple zone groups, including overlapping groups, would have been a straightforward combination of known methods (saving a party mode group persistently) to yield predictable results (multiple persistent groups that could be selected for

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playback at a later time) and predictable improvements for users, such as the ability to create a group in the morning but only playback to it in the evening, or alternatively to create a morning zone group in the afternoon, but only invoke it in the morning. Modifying Sonos 2005 with the Squeezebox System in this way would have required nothing more than a substitution of one known element (a group) for another (a party group) to obtain predictable results—the ability for the user to create and access multiple groups at different times without having to link or unlink speakers each and every time. This modification to Sonos 2005 would have used known techniques (the ability to save persistently a party group) to improve similar devices (zone players) in the same way to achieve predictable results—the ability to set up different groups for later playback and not have to keep manually linking/unlinking multiple zones every time. I have discussed in my prior reports multiple prior art systems and references that demonstrated to a POSITA that there would be reasonable expectations of success in making this combination.

32. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Squeezebox.

5. Sonos's 2005 System in view of Rajapakse

33. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Rajapakse. I also addressed Rajapakse in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Sonos's 2005 system in view of Rajapakse provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Rajapakse. A POSITA would have been motivated to expand the group functionality of the Sonos 2005 system

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in view of Rajapakse to allow for additional persistently-saved groups beyond the existing party mode.

34. For the same reasons I discussed above in relation to Sonos 2005 in view of the knowledge of a POSITA, a POSITA would have had a reasonable expectation of success in making such a modification. This is at least obvious because there is no specific technical challenge or hurdle for saving two groups as opposed to saving one group. A POSITA would have been motivated to look for publications related to multi-speaker or multi-zone systems, such as the Rajapakse publication. Expanding the “party mode” functionality and allowing a user to save persistently multiple zone groups, including overlapping groups, would have been a straightforward combination of known methods (saving a party mode group persistently) to yield predictable results (multiple persistent groups that could be selected for playback at a later time) and predictable improvements for users, such as the ability to create a group in the morning but only playback to it in the evening, or alternatively to create a morning zone group in the afternoon, but only invoke it in the morning. Modifying Sonos 2005 with Rajapakse in this way would have required nothing more than a substitution of one known element (a group) for another (a party group) to obtain predictable results—the ability for the user to create and access multiple groups at different times without having to link or unlink speakers each and every time. This modification to Sonos 2005 would have used known techniques (the ability to save persistently a party group) to improve similar devices (zone players) in the same way to achieve predictable results—the ability to set up different groups for later playback and not have to keep manually linking/unlinking multiple zones every time. I have discussed in my prior reports multiple prior art systems and references that demonstrated to a POSITA that there would be reasonable expectations of success in making this combination.

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35. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Rajapakse.

6. Sonos's 2005 System in view of Lindemann

36. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Lindemann. I also addressed Lindemann in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Sonos's 2005 system in view of Lindemann provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Lindemann. A POSITA would have been motivated to expand the group functionality of the Sonos 2005 system in view of Lindemann, to allow for additional persistently-saved groups beyond the existing party mode.

37. For the same reasons I discussed above in relation to Sonos 2005 in view of the knowledge of a POSITA, a POSITA would have had a reasonable expectation of success in doing so. This is at least obvious because there is no specific technical challenge or hurdle for saving two groups as opposed to saving one group. A POSITA would have been motivated to look for publications related to multi-speaker and/or multi-zone systems, such as the system described in Lindemann, including multiple groups of speakers and allowing one speaker to be assigned to two groups. Expanding the "party mode" functionality and allowing a user to save persistently multiple zone groups, including overlapping groups, would have been a straightforward combination of known methods (saving a party mode group persistently) to yield predictable results (multiple persistent groups that could be selected for playback at a later time) and predictable improvements

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for users, such as the ability to create a group in the morning but only playback to it in the evening, or alternatively to create a morning zone group in the afternoon, but only invoke it in the morning. Modifying Sonos 2005 with Lindemann in this way would have required nothing more than a substitution of one known element (a group) for another (a party group) to obtain predictable results—the ability for the user to create and access multiple groups at different times without having to link or unlink speakers each and every time. This modification to Sonos 2005 would have used known techniques (the ability to save persistently a party group) to improve similar devices (zone players) in the same way to achieve predictable results—the ability to set up different groups for later playback and not have to keep manually linking/unlinking multiple zones every time. I have discussed in my prior reports multiple prior art systems and references that demonstrated to a POSITA that there would be reasonable expectations of success in making this combination.

38. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Lindemann.

7. Sonos's 2005 System in view of Crestron

39. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Crestron. I also addressed Crestron in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Sonos's 2005 system in view of Crestron provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Crestron. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that

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asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Crestron.

40. As Dr. Almeroth acknowledges, I addressed that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Crestron in my November 30, 2022 Opening Report. Dr. Almeroth had ample opportunity to respond to my opinions about Crestron in his reply report, and he did. *See* Almeroth 2023.01.13 Rebuttal Report ¶¶744-772. As I pointed out, Dr. Almeroth takes inconsistent positions with respect to “zone scenes,” as evidenced for example through his analysis of the Crestron reference. Dr. Almeroth claimed that Crestron in combination with Sonos 2005 did not render obvious claim 1 of the '966 patent because it did not have any capability for a user to assign a thematic name to a “Room Group,” whereas Dr. Almeroth did not consider this ability to assign a thematic name to be required in his infringement analysis.

41. In his March 21, 2023 supplemental report, Dr. Almeroth claims to be confused as to whether I offer an opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of “[my] new ‘Crestron’ reference.” Crestron is not a new reference, and I've already offered an opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Crestron. *See, e.g.,* Nov 30, 2022 Op. Report at ¶332.

42. Dr. Almeroth complains that I did not “identify Crestron as a relevant prior art reference or provide any analysis” in my Showdown Opening Report, yet he acknowledges that I provided such an analysis in my November 30, 2022 Opening Report, and that he responded to this analysis in his January 13, 2023 report. Almeroth March 21, 2023 Report at ¶73. Without any explanation for why he did not include these arguments in his January 13, 2023 report, Dr. Almeroth now addresses a “number of flaws” about the Sonos 2005 and Crestron obviousness combination—but Dr. Almeroth provides no justification to address these alleged “flaws” now, when he could have (and did) address some of them in his earlier reports.

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43. Dr. Almeroth claims that I have failed to establish Crestron as a prior art reference. But Crestron Adagio was described in printed publications, or in public use, on sale, sold, and known in the United States before the priority date of the '885 patent as evidenced by a number of publicly-available documents including, *e.g.*, those listed below, making the Crestron Adagio system and other Crestron product features prior art under at least 35 U.S.C. § 102(a).

Bates	Document	Date
GOOG-SONOSNDCA-00117940	Crestron Adagio AES Manual	2005
GOOG-SONOSNDCA-00118185	Crestron C2N-DAP8RC Digital Audio Processor With Room Control Operations Guide	2004
GOOG-SONOSNDCA-00118300	Crestron responds to Control 4, Adagio at CEDIA	September 2005
GOOG-SONOSNDCA-00118319	Crestron D3 Pro - Reference Guide	2002
GOOG-SONOSNDCA-00118451	Industry Award for Crestron Adagio system	2005
GOOG-SONOSNDCA-00118604	Crestron RoomView Software Reference Guide	2003

44. Almeroth claims that various materials related to Crestron are cited on the face of the '885 patent and that although invalidity must still be proven by clear and convincing evidence, I have an added burden to overcome the presumption of validity. I understand that the Examiner of the '885 patent may have considered certain references to the Crestron system (listed below). However, even assuming that the Examiner properly considered these references, the Examiner did not consider all the Crestron references I relied on—for example, the Examiner did not consider the Crestron references I listed above, all of which predate the priority date of the '885 patent, including for example the 2005 Adagio AES manual. Nor is there any evidence that the Examiner considered the 2005 Crestron Adagio AES product itself, much less the Crestron system in combination with the Sonos 2005 system.

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Crestron Adagio AMS Media System Operations Guide	2008
Crestron Adagio Home Entertainment is Just the Beginning	2007
Crestron AVS Forum	Dec 1, 2007
Crestron Industry Awards, Crestron's Spirit of Innovation has Resulted in the Most Award - Winning Products in the Industry	2006
Crestron Industry Awards, Crestron's Spirit of Innovation has Resulted in the Most Award - Winning Products in the Industry	2007

45. Dr. Almeroth claims that Crestron does not disclose a first zone player. Dr. Almeroth focuses on the “conventional centralized speaker system” aspect of the Crestron AES systems, and disclosures related to hardwiring speakers in different rooms to the centralized AES device. Dr. Almeroth further tries to construe “zone player” as requiring wireless data networking and data processing capability, claiming that Crestron hard-wired speakers cannot be zone players because they are not wireless. But Dr. Almeroth provides no reason why the claimed zone players would need to be wireless—there is nothing in the claims or in the specification that requires the zone players to be wireless zone players, rather than wired zone players. Instead, the specification of the ’885 patent includes references to zone players having a wired interface, and provides examples in which they may be wireless—but does not require them to be wireless. *See, e.g.*, ’885 patent at 5:48-50 (“In one embodiment, a zone player includes both of the interfaces 216 and 217, and other zone players include only a RF or wired interface.”), at 4:62-66 (“The network 108 may be a wired network, a wireless network or a combination of both. In one example, all devices including the zone players 102, 104 and 106 are coupled to the network 108 by wireless means based on an industry standard such as IEEE 802.11.”) Additionally, Dr. Almeroth misunderstands my point. I did not rely on Crestron for the disclosure of “zone players.” Instead, as I explained in my November 30, 2022 Opening Report, my opinion is that Sonos 2005, in combination with

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Crestron, renders obvious the '885 and '966 patents because to the extent the Sonos 2005 system is found to not explicitly disclose “zone scenes,” these “zone scenes” would have been obvious to a POSITA in view of Crestron.

46. Finally, Dr. Almeroth claims I have not provided “any explanation as to how Sonos’s 2005 system would have actually been modified to combine it with the identified functionality of Crestron’s centralized AES speaker system,” and Dr. Almeroth disagrees that a POSITA in 2005-2006 would have been motivated to modify Sonos’s 2005 system to combine it with “the identified functionality of Crestron’s centralized AES speaker system.” As I explained in view of the Sonos Forums, to the extent that the Sonos 2005 system itself did not include the claimed “zone scenes,” users of the Sonos system were motivated to modify the Sonos 2005 system to include such “zone scene” functionality, including the ability to create multiple overlapping zone scenes, and the ability to save such zone scenes persistently. As I explained in my November 30, 2022 Opening Report, the Crestron system provided users with the ability to group speakers and name these groups across multiple rooms, such that different users could listen selectively to different audio sources, but a user could easily combine speakers in adjacent rooms or combine all speakers in the house. These groups could be defined, named, and saved. *See, e.g.*, Nov 30, 2022 Op. Report at ¶439.

47. More specifically, Crestron’s Adagio system offered multi-room audio including naming and supported “Room Groups,” with no limitation on grouping. *See, e.g.*, GOOG-SONOSNDCA-00117940 (“Room Groups - The ‘Group’ feature makes it simple to combine speakers in adjacent rooms, or switch into whole-house party mode, by letting the user link any number of rooms to function as one. Grouping lets you easily route one source to multiple rooms at once without the sync problems common to streaming-based systems. Up to 6 groups can be defined using the front panel Group buttons.”.) Accordingly, Crestron’s Adagio system included

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the ability to create zone groups while maintaining the ability to play to individual zones within those groups.

48. A POSITA familiar with Sonos's 2005 system would have been motivated to create zone groups within the home while retaining the ability to play individually to some speakers within those zone groups—for example a POSITA would have been motivated to create an upstairs group and a downstairs group, but to also be able to play only to the kitchen speaker. A POSITA looking for different ways to integrate whole-home systems would have been motivated to look to Crestron's Adagio system because it provided a full home solution, including audio, and had received a 2005 innovation award. Modifying the Sonos 2005 system to include persistently-saved zone groups that still allowed users to play back to individual speakers would only require storing group information-, and a POSITA would have found this to be no more than the straightforward application of a known storage method (persistent memory) to known data (group information). I have discussed in my prior reports multiple prior art systems and references that demonstrated to a POSITA that there would be reasonable expectations of success in making this combination.

49. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Crestron.

8. Sonos's 2005 System in view of Yamaha DME

50. I addressed Yamaha in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Sonos's 2005 system in view of Yamaha provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Yamaha. Thus, nothing in

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Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Yamaha.

51. First, Dr. Almeroth contends that Yamaha DME was cited on the face of the '885 patent and therefore contends that Google should somehow be precluded from relying on it. Simply because the USPTO cited certain references during prosecution does not mean that these references were considered, much less in combination with the Sonos 2005 system. And the Examiner was not aware of Sonos's current position that it came up with the ability to save a speaker group persistently, *i.e.*, to create "zone scenes." As I mentioned in my November 30, 2022 Opening Report, while the Examiner found that DME did "not explicitly teach the inclusion, exclusion, etc. of particular enumerated first, second, etc. players of the set of available players to form, create, save, recall etc. a particular first, second, etc. grouping," the Examiner took "official notice that the grouping and sub-grouping of a constellation of audio players to include or disclude particular players from an operational set was well known in the art before the effective filing date of the instant invention and would have been an obvious inclusion." 2019-07-05 Non-Final Rejection.

52. The Examiner further found that "[t]he DME system enables the practice of the claimed subject matter without undue experimentation and as such grouping playback device and channels thereon would have been obvious as a matter of routine experimentation over the course of normal operation by the average skilled practitioner upon the DME interface to create, save, and recall various configurations including and/or excluding the particular enumerated playback devices." *Id.* The Examiner noted in an Examiner-Initiated Interview Summary that DME did "appear to disclose the predetermined media with a similar degree of specificity" as the claims. 2019-07-05 Examiner Initiated Interview Summary. As Dr. Almeroth's First Supplemental Report

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does not address these facts, I understand that he concedes them. Further, the USPTO did not have the benefit of the Court's claim construction for "zone scene."

53. Second, Dr. Almeroth contends that Yamaha does not disclose a first zone player. Dr. Almeroth misunderstands my point. I did not rely on Yamaha for the disclosure of "zone players." Instead, as I explained in my November 30, 2022 Opening Report, my opinion is that Sonos 2005, in combination with Yamaha, renders obvious the '885 and '966 patents because to the extent the Sonos 2005 system is found to not explicitly disclose "zone scenes," these "zone scenes" would have been obvious to a POSITA in view of Yamaha. A POSITA would have been motivated to look to other audio systems such as Yamaha for ways to improve the Sonos 2005 system, including the ability for users to have multiple persistently-saved groups. For the same reasons I discussed above in relation to Sonos 2005 in view of the knowledge of a POSITA, a POSITA would also have had a reasonable expectation of success when modifying the functionality of Sonos 2005 with the saved groups of Yamaha. This is at least obvious because there is no specific technical challenge or hurdle for saving two groups as opposed to saving one group.

54. Third, Dr. Almeroth contends that the evidence he "reviewed does not disclose or suggest that any of these concepts amounts to a pre-saved group that was available to be later invoked on demand for synchronous playback at some time after creation, which is a fundamental requirement of the claimed 'zone scenes.'" Further, the evidence I have reviewed does not disclose or suggest that any of these concepts amounts a pre-saved group that was able to exist in an inactive state in which the pre-saved group was available for selection by a user but the group members could still be used for individual audio playback (or as part of another group), which is another fundamental requirement of the claimed 'zone scenes.'" First Supplemental Rpt. at ¶105. I disagree. As I opined in my November 30, 2022 Opening Report (¶¶256-258), Yamaha allows for

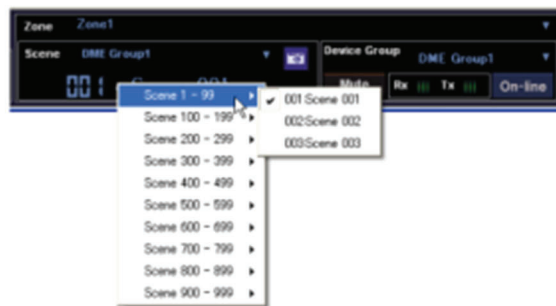
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zone scenes in the DME system to be named, saved, and recalled. Indeed, group names for parameter links/list are also named and saved in the DME system. *Id.* Dr. Almeroth does not address this evidence.

55. Fourth, Dr. Almeroth further contends that Yamaha DME “does not disclose or suggest that any of these concepts amounts [to] a pre-saved group comprising group members that are also able to be added to other pre-saved groups that co-exist with the pre-saved group such that multiple co-existing pre-saved groups having common group members can be created and made available for selection.” First Supplemental Rpt. at ¶105. Again, I disagree. As articulated in my Opening Report, Yamaha DME discloses that the same group may be included within different scenes or “scene links,” such that these scenes have members in common. Opening Report (¶¶261; 264-265). Yamaha DME discloses that different scenes can exist concurrently, *i.e.*, that multiple zone scenes can be saved persistently. *See, e.g.*, Yamaha DME at 55, reproduced below:

■ **[Scene Number]**

Displays the number of the current scene or scene link. A list where you can select a scene or scene link is displayed when you press the [▼]. The EDIT indicator will light when a parameter has been edited after recalling or storing a scene.



56. Fifth, Dr. Almeroth asserts that I purportedly failed “to identify any functionality of a Yamaha DME system that amounts to a DME unit or SP2060 unit receiving indications that the DME unit or SP2060 unit receiving has been added to two different zone scenes that overlap with one another while the DME unit ‘continu[es] to operate in the standalone mode...’” First Supplemental Rpt. at ¶110. Yet, Dr. Almeroth fails to address the arguments in my Opening

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Report that Yamaha's DME system uses IP connections for device group master/slave status of DME and SP2060 units. Opening Report (¶¶261-262). I have discussed in my prior reports multiple prior art systems and references that demonstrated to a POSITA that there would be reasonable expectations of success in making this combination.

57. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Sonos's 2005 system in view of Yamaha.

9. Summary

58. Dr. Almeroth fundamentally misunderstands or mischaracterizes my opinions with respect to invalidity of the '885 patent asserted claim 1 based on the Sonos System, in combination with the level of skill of a POSITA, the Sonos Forums, Nourse, Millington, Squeezebox, Crestron, Yamaha DME, Rajapakse and/or Lindemann. As discussed in my previous reports and the subsections mentioned above, there are a number of different limitations of asserted claim 1 of the '885 patent that are disclosed by Sonos's 2005 system and/or rendered obvious by Sonos's 2005 system in view of the general knowledge of a POSITA, the Sonos Forums, Nourse, Millington, Squeezebox, Rajapakse, Lindemann, Crestron, or Yamaha DME, and when taken collectively, these claim limitations provide even further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious by Sonos's 2005 system in view of the general knowledge of a POSITA, Sonos Forums, Nourse, Millington, Squeezebox, Rajapakse, Lindemann, Crestron, or Yamaha DME.

B. Claims of the '885 Patent Are Anticipated And/Or Rendered Obvious Based On Prior Art Squeezebox

1. Squeezebox in view of The General Knowledge of a POSITA

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59. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is anticipated and/or rendered obvious based on Squeezebox in view of the "general knowledge of a POSITA." I also addressed Squeezebox in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Squeezebox alone and/or in view of the "general knowledge of a POSITA" provide further support for my opinion that asserted claim 1 of the '885 patent is anticipated and/or rendered obvious based on Squeezebox in view of the "general knowledge of a POSITA." Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is anticipated and/or rendered obvious based on Squeezebox in view of the "general knowledge of a POSITA."

2. Squeezebox in view of Sonos 2005

60. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Sonos 2005 I also addressed Squeezebox in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Squeezebox in view of Sonos 2005 provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of the Sonos 2005. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Sonos 2005.

3. Squeezebox in view of Sonos Forums

61. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view

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of Sonos Forums. I also addressed Squeezebox in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Squeezebox in view of the Sonos Forums provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of the Sonos Forums. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Sonos Forums.

4. Squeezebox in view of Millington

62. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Millington. I also addressed Squeezebox in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Squeezebox in view of the Millington provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Millington. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Millington.

5. Squeezebox in view of Nourse

63. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Nourse. I also addressed Squeezebox in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over

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Squeezebox in view of the Nourse provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Nourse. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Expert Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Nourse.

6. Squeezebox in view of Rajapakse

64. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Rajapakse. I also addressed Squeezebox in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Squeezebox in view of the Rajapakse provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Rajapakse. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Rajapakse.

7. Squeezebox in view of Lindemann

65. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Lindemann. I also addressed Squeezebox in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Squeezebox in view of Lindemann provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Lindemann. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Squeezebox in view of Lindemann.

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8. Summary

66. Dr. Almeroth fundamentally misunderstands or mischaracterizes my opinions with respect to invalidity of the '885 patent asserted claim 1 based on Squeezebox, in combination with the level of skill of a POSITA, the Sonos Forums, Millington, Nourse, Rajapakse, or Lindemann. As discussed in my previous reports and the sub-sections mentioned above, there are a number of different limitations of asserted claim 1 of the '885 patent that are disclosed by Squeezebox and/or rendered obvious by Squeezebox in view of the general knowledge of a POSITA, the Sonos Forums, Millington, Nourse, Rajapakse, or Lindemann, and when taken collectively, these claim limitations provide even further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious by Squeezebox in view of the general knowledge of a POSITA, the Sonos Forums, Millington, Nourse, Rajapakse, or Lindemann.

C. Claims of the '885 Patent Are Obvious Based On Prior Art Bose Lifestyle 50 System

1. The Bose Lifestyle 50 System in view of The General Knowledge of a POSITA

67. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Bose in view of the “general knowledge of a POSITA.” I also addressed Bose in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Bose in view of the “general knowledge of a POSITA” provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Bose in view of the “general knowledge of a POSITA.” Thus, nothing in Dr. Almeroth’s First Supplemental Rebuttal Report

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alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Bose in view of the "general knowledge of a POSITA."

2. The Bose Lifestyle 50 System in view of Nourse

68. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Bose in view of Nourse. I also addressed Bose in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Bose in view of Nourse provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Bose in view of Nourse. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Bose in view of Nourse.

3. The Bose Lifestyle 50 System in view of Rajapakse

69. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Bose in view of Rajapakse. I also addressed Bose in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Bose in view of Rajapakse provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Bose in view of Rajapakse. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Bose in view of Rajapakse.

4. The Bose Lifestyle 50 System in view of Millington

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70. In my June 22, 2022 Opening Report for the patent showdown, I provided several opinions that asserted claim 1 of the '885 patent is rendered obvious based on Bose in view of Millington. I also addressed Bose in the context of the '966 patent, in my Opening and Reply Reports served on November 30, 2022, and January 23, 2023, respectively. As such, my analyses and opinions regarding the invalidity of the asserted claims of the '966 patent over Bose in view of Millington provide further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Bose in view of Millington. Thus, nothing in Dr. Almeroth's First Supplemental Rebuttal Report alters my opinion that asserted claim 1 of the '885 patent is rendered obvious based on Bose in view of Millington.

5. Summary

71. Dr. Almeroth fundamentally misunderstands or mischaracterizes my opinions with respect to invalidity of the '885 patent asserted claim 1 based on Squeezebox, in combination either in view of the general knowledge of a POSITA, Nourse, Rajapakse, or Millington. As discussed in my previous reports and the sub-sections mentioned above, there are a number of different limitations of asserted claim 1 of the '885 patent that are disclosed by Bose and/or rendered obvious by Bose in view of the general knowledge of a POSITA, Nourse, Rajapakse, or Millington, and when taken collectively, these claim limitations provide even further support for my opinion that asserted claim 1 of the '885 patent is rendered obvious by Bose in view of the in view of the general knowledge of a POSITA, Nourse, Rajapakse, or Millington.

6. Obviousness Type Double Patenting Over U.S. Patent No. 9,141,645

72. I set forth my opinions on obviousness-type double patenting in my November 30, 2022 Opening Report, and Dr. Almeroth had ample opportunity to respond in his January 13, 2023 report—he even admits he addressed my double-patenting opinion in his rebuttal report.

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Nonetheless, and without any explanation, Dr. Almeroth provides new arguments with respect to obviousness-type double patenting based on Sonos's U.S. Patent No. 9,141,645 ("the '645 patent").

73. First, Dr. Almeroth reiterates his argument that I allegedly relied on the disclosure in the specification of the '645 patent instead of the claim language in claim 1 of the '645 patent. I did not rely on the specification of the '645 patent to "fill gaps." Instead, I relied on the disclosure of claimed embodiments in the '645 patent to understand the scope and meaning of claim 1 of the '645 patent. Dr. Almeroth's argument that I am relying on unclaimed embodiments is based on a misleading interpretation of the portion of the specification disclosing that "[a]s shown in Fig. 3A, the zone players 2 and 4 are in a zone group started by the zone player 2, the zone player 4 (even the zone player 2) can be in another zone group, for example, while a player in a living room is grouped with a player in a dining room, the same player in the living room can be grouped with a player in a family room." This passage makes clear that a player in a living room can "while" grouped with a player in a dining room also be grouped with a second player in a family room. If the specification intended to disclose that "the act of selecting the zone player for use in the new zone group would automatically cause the zone player to be removed from its prior zone group" it could have said so. It didn't. Instead, the specification makes clear that the player can be part of a second zone group "while" at the same time part of a first zone group. Fig. 3A does not change my opinion on this point—Fig. 3A only shows zone selection with respect to the tracks and artists being played in each zone, but it is silent with respect to which speakers are part of which zone.

74. Second, Dr. Almeroth argues that claim 1 of the '645 patent does not disclose or render obvious certain elements of claim 1 of the '885 and '966 patents, related to the "zone scene" technology. I disagree. Dr. Almeroth reiterates his opinion that claim 1 of the '645 patent describes functionality related to a "Sonos ad-hoc 'zone group,' which is not a 'zone scene.'" Dr.

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Almeroth also states that “the mere fact that a ‘zone group’ was saved and could be ‘retrieved for modification at any time’ does not satisfy the requirements of a ‘zone scene’ because a ‘zone group’ could only exist in an invoked state (during which time the group members can only operate as part of the ‘zone group’) whereas a ‘zone scene’ is a pre-saved, predefined group of zone players that is able to exist in an uninvoked state (during which time the group members can operate individually or as part of other groups) while remaining available for selection by a user so that the group can be invoked later on demand for synchronous playback.” Almeroth March 21, 2023 Supplemental Report at ¶183. I continue to disagree with Dr. Almeroth, at least because he is reading into claim 1 of the ’645 patent what he believes to be the behavior of the Sonos 2005 system. But claim 1 of the ’645 patent does not include any requirement that the saved zone groups exist only in an invoked state—and to the contrary the specification of the ’645 patent includes embodiments where no automatic or default invocation is required. For example, with respect to the example of Fig. 3A discussed above, a player can be part of a second zone group “while” at the same time part of a first zone group—it is impossible for both zone groups to be automatically invoked, such that at least one of the zone groups is a saved group which is not invoked by default and for which group members can operate as a part of other groups while remaining available for selection by a user.

75. Third, Dr. Almeroth makes a conclusory assertion that I have failed to sufficiently articulate how or why a POSITA would have found claim 1 of the ’885 patent to be obvious in view of claim 1 of the ’645 patent. However, for the same reasons that I explained with respect to Sonos forums for example, to the extent that the Sonos 2005 system itself did not include the claimed “zone scenes,” users of the Sonos system were motivated to modify the Sonos 2005 system to include such “zone scene” functionality, including the ability to create multiple overlapping zone scenes, and the ability to save such zone scenes persistently. As I explained in my November

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30, 2022 Opening Report, the '645 patent disclosed providing users with the ability to create “pre-saved, predefined group[s] of zone players [] able to exist in an uninvoked state (during which time the group members can operate individually or as part of other groups) while remaining available for selection by a user so that the group can be invoked later on demand for synchronous playback.” *See, e.g.*, Nov 30, 2022 Op. Report at ¶¶809-854.

IX. DEMONSTRATIVES

76. To help assist in my testimony at trial, I have prepared a number of demonstratives that are attached hereto as Exhibit 1. I reserve the right to create demonstratives based on the opinions I included in this Report, as well as the evidence and testing that I conducted as disclosed in this Report. I also reserve the right to rely on the demonstratives that were attached to my prior reports and this Report.

77. I have also reviewed Google’s Technology Tutorial that provides an overview of the '885 patent, which I understand was submitted to the Court in February 2022. I expressly reserve the right to use the Technology Tutorial in whole or in part as a demonstrative to assist in my testimony.

X. OTHER COMMENTS

78. The opinions expressed in this Report are my preliminary opinions based on my review to date of the evidence produced at this stage of the case. I reserve the right to amend or supplement my opinions in light of additional information or materials that may be provided to me or that are relied upon by any of Sonos’s experts or witnesses, as well as opinions that Sonos’s experts or witnesses may present. I reserve my right to amend or update my opinions as appropriate in response to any future developments. I also understand that Google has also filed an *Inter Partes* Review challenging claims of the '645 patent. *See* IPR2021-01563. To the extent that Sonos presents statements in the IPR proceedings regarding claim language impacting the

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'885 or '966 patents (*e.g.*, “zone group”), I reserve the right to rely upon any further statements that Sonos may make in the IPR proceedings that relate to my analysis, including statements regarding the meaning of claim terms, the understanding of a person of skill in the art, and the scope and content of the prior art. With this in mind, based on the analysis I have conducted and for the reasons set forth below, I have preliminarily reached the conclusions and opinions in this Report.

79. At a hearing or at trial I may use as exhibits various documents produced in this case that refer or relate to the matters discussed in this Report. I have not yet selected the particular exhibits that might be used. I may also rely on visual aids and may rely on analogies concerning elements of the patents discussed above, scope and interpretation of the asserted claim, infringement allegations, conception, diligence, and reduction to practice, Sonos’s alleged practicing products, the Accused Products, the references cited in this Report, and secondary considerations, or any related technologies. In addition, I may create or assist in the creation of certain demonstrative evidence to assist me in testifying, and I reserve the right to do so, such as demonstrations of devices and software to further support the positions in this Report.

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I, Dan Schonfeld, declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

A handwritten signature in black ink that reads "Dan Schonfeld". The signature is written in a cursive style, with the first name "Dan" and the last name "Schonfeld" clearly legible. The signature ends with a large, circular flourish.

DATED: April 14, 2023

Dan Schonfeld, Ph.D